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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/866,687	05/30/2001	Takeshi Misawa	0905-0261P	6060
2292	7590	09/10/2004	EXAMINER	
BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			YE, LIN	
			ART UNIT	PAPER NUMBER
			2615	3

DATE MAILED: 09/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/866,687

Applicant(s)

MISAWA, TAKESHI

Examiner

Lin Ye

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 May 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oda J.P.

Publication 11-275594 in view of Ishihara et al. J.P. Publication 2000-152259.

Referring to claim 1, the Oda reference discloses in Drawings 1 and 11(b), a solid-state electronic imaging device (10) (See Detailed Description [0024]) comprising: a lot of photoelectric conversion elements (Pi) arranged in the column direction and the row direction; vertical transfer paths (12a-12d) for transferring signal charges respectively accumulated in said photoelectric conversion elements in the vertical direction; vertical driving signals (V1-V4, see [0029]) for respectively shifting the signal charges accumulated in the photoelectric conversion elements to said vertical transfer paths; a horizontal transfer path (e.g., the horizontal transfer path including a odd transfer way 14a and a even transfer way 14b) for horizontally transferring the signal charges transferred from the vertical transfer paths; color filters (See [0036]) respectively formed on the photoelectric conversion elements and arranged such that the order of color signal components respectively represented by the signal charges substantially corresponding to one row which are inputted to the horizontal

transfer path in reading out all pixels is a repetition of a red signal component, a green signal component, a blue signal component, and a green signal component, and the respective timings at which the red signal component and the blue signal component are outputted in odd rows (34a) are reverse to those in even rows (34b); and readout control means for applying the transfer gate pulses to said vertical driving signals such that the order of color signal components respectively represented by the signal charges substantially corresponding to one row which are inputted to the horizontal transfer path is a repetition of a red signal component, a green signal component, a blue signal component, and a green signal component in every other row, and the respective timings at which the red signal component and the blue signal component are outputted in odd rows are reverse to those in even rows (See Figure 11(b) and [0048]). However, the reference does not explicitly show **transfer gates** controlled by the vertical driving signals (V1-V4, see [0029]) for respectively shifting the signal charges accumulated in the photoelectric conversion elements to said vertical transfer paths.

The Ishihara reference discloses in Drawing 2, a solid-state electronic imaging device (See [0020]-[0021]) comprising the image pick-up section (108) and color separation filter for separating the color of incident light corresponded to the incident light side from photo detector (108a); and transfer gates (108b) for respectively shifting the signal charges accumulated in the photoelectric conversion elements to said vertical transfer paths upon receipt of transfer gate pulses. The Ishihara reference is evidence that one of ordinary skill in the art at the time to see more advantages for the transfer gates formed on the image pick-up section for shifting the signal charges from the photoelectric conversion elements to vertical

transfer path so that the photoelectric conversion elements would not leak the signal charge which received to the photoelectric conversion elements between the vertical transfer components. For that reason, it would have been obvious to see the image pick up device has **transfer gates** controlled by the vertical driving signals (V1-V4, see Detailed Description [0029]) for respectively shifting the signal charges accumulated in the photoelectric conversion elements to said vertical transfer paths disclosed by Oda.

Referring to claim 2, the Oda and Ishihara references disclose all subject matter as discussed in respected claim 1, and the Ishihara reference discloses photoelectric conversion elements are in a honeycomb arrangement where they are arranged in odd rows or even rows with respect to odd columns and arranged in even rows or odd rows with respect to even columns, and the color filters which allow the transmission of a green light component are respectively arranged in said photoelectric conversion elements in odd rows or even rows, and the color filters which allow the transmission of a blue or red light component are alternately arranged for each column and for each row in said photoelectric conversion elements in even rows or odd rows (See Ishihara reference Drawing 6a, and Detailed Description [0040]).

Referring to claim 3, the Oda and Ishihara references disclose all subject matter as discussed in respected claim 1, and the Ishihara reference discloses wherein said color filters are in a G-stripe R/B checkered arrangement where the color filters which allow the transmission of a green light component are arranged in a vertical stripe shape, and the color filters which allow the transmission of a blue or red light component are arranged in a checkered shape (See Drawings 2, 4-6, Detailed Description [0020] and [0034]).

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Referring to claim 4, the Oda and Ishihara references disclose all subject matter as discussed in respected claim 1.

Conclusion

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
 - a. Ishihara et al. J.P. Publication 2000-196965 discloses in Drawing 4, a readout control means for reading the signal charges substantially corresponding to one row which are inputted to the horizontal transfer path is a repetition of a red signal component, a green signal component, a blue signal component, and a green signal component in every other row, and the respective timings at which the red signal component and the blue signal component are outputted in odd rows are reverse to those in even rows.
4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Lin Ye** whose telephone number is **(703) 305-3250**. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Christensen can be reached on (703) 308-9644.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, DC. 20231

Or faxed to:

(703) 872-9306

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Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal drive,
Arlington, VA., Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or
proceeding should be directed to the Technology Center 2600 Customer Service Office
whose telephone number is (703) 306-0377.

Lin Ye
September 2, 2004

A handwritten signature in black ink, appearing to read 'Andrew Christensen', with a long horizontal line extending to the right.

ANDREW CHRISTENSEN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600